

15 AF

PTO/SB/21 (01-08)

Approved for use through 04/30/2008. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

# TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

19

Application Number

10/710,753

Filing Date

July 30, 2004

First Named Inventor

Dinesh R. Patel

Art Unit

3672

Examiner Name

Harcourt, Brad

Attorney Docket Number

68.0505

## ENCLOSURES

(Check all that apply)



Fee Transmittal Form



Fee Attached



Amendment/Reply



After Final



Affidavits/declaration(s)



Extension of Time Request



Express Abandonment Request



Information Disclosure Statement



Certified Copy of Priority Document(s)



Reply to Missing Parts/ Incomplete Application



Reply to Missing Parts under 37 CFR 1.52 or 1.53



Drawing(s)



Licensing-related Papers



Petition



Petition to Convert to a Provisional Application



Power of Attorney, Revocation Change of Correspondence Address



Terminal Disclaimer



Request for Refund



CD, Number of CD(s) \_\_\_\_\_



Landscape Table on CD



After Allowance Communication to TC



Appeal Communication to Board of Appeals and Interferences



Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)



Proprietary Information



Status Letter



Other Enclosure(s) (please identify below):

postcard  
PTO-Form 238

Remarks

## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name

VAN SOMEREN, PC

Signature

*Robert A. Van Someren*

Printed name

Robert A. Van Someren

Date

Reg. No.

36,038

## CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature

*Robert A. Van Someren*

Typed or printed name

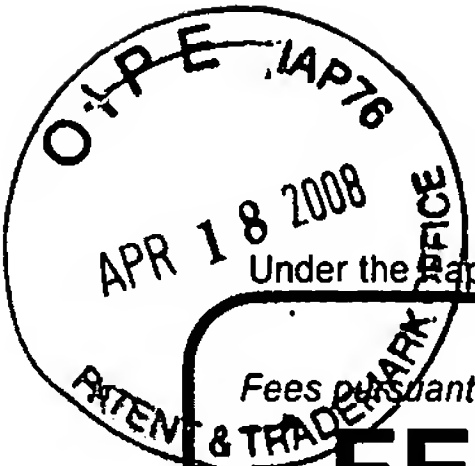
Robert A. Van Someren

Date

April 14, 2008

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



Effective on 12/08/2004.

Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

# FEE TRANSMITTAL

## For FY 2008

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$)  
10.00

### Complete if Known

Application Number	10/710,753
Filing Date	July 30, 2004
First Named Inventor	Dinesh R. Patel
Examiner Name	Harcourt, Brad
Art Unit	3672
Attorney Docket No.	68.0505

### METHOD OF PAYMENT (check all that apply)

☐ Check ☒ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): \_\_\_\_\_  
☒ Deposit Account Deposit Account Number: 50-3054 Deposit Account Name: VAN SOMEREN, PC

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee  
☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☐ Credit any overpayments

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

### FEE CALCULATION

#### 1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	310	155	510	255	210	105	
Design	210	105	100	50	130	65	
Plant	210	105	310	155	160	80	
Reissue	310	155	510	255	620	310	
Provisional	210	105	0	0	0	0	

#### 2. EXCESS CLAIM FEES

Fee Description	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	210	105
Multiple dependent claims	370	185

Total Claims      Extra Claims      Fee (\$)  
\_\_\_\_\_ - 20 or HP = \_\_\_\_\_ x \_\_\_\_\_ = \_\_\_\_\_

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims      Extra Claims      Fee (\$)  
\_\_\_\_\_ - 3 or HP = \_\_\_\_\_ x \_\_\_\_\_ = \_\_\_\_\_

HP = highest number of independent claims paid for, if greater than 3.

Multiple Dependent Claims  
Fee (\$)  
\_\_\_\_\_

#### 3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$260 (\$130 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets      Extra Sheets      Number of each additional 50 or fraction thereof      Fee (\$)  
\_\_\_\_\_ - 100 = \_\_\_\_\_ / 50 = \_\_\_\_\_ (round up to a whole number) x \_\_\_\_\_ = \_\_\_\_\_

#### 4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Appeal Brief

Fees Paid (\$)

10.00

#### SUBMITTED BY

Signature

Registration No. 36,038  
(Attorney/Agent)

Telephone 281-373-4369

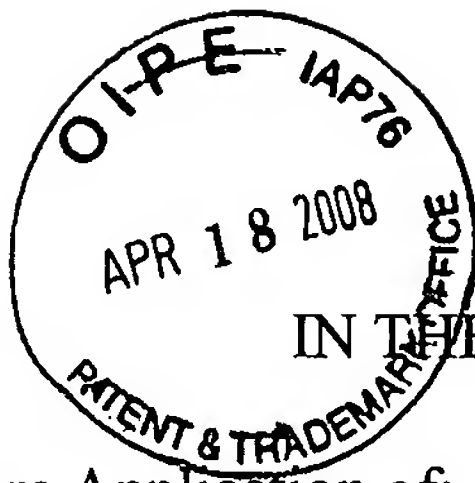
Name (Print/Type)

Robert A. Van Someren

Date April 14, 2008

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Dinesh R. Patel

Serial No.: 10/710,753

Filed: July 30, 2004

For: Cross Flow Prevention System and Valve

§  
§  
§  
§  
§  
§  
§  
§  
§

Group Art Unit: 3672

Examiner: Harcourt, Brad

Atty Docket: 68.0505

Assistant Commissioner  
for Patents  
Washington, D.C. 20231

CERTIFICATE OF MAILING  
37 C.F.R. 1.8

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date below:

April 14, 2008

Date

Robert A. Van Someren

Sir:

**APPEAL BRIEF PURSUANT TO 37 C.F.R. §§ 41.31 AND 41.37**

This Appeal Brief is being filed in furtherance to the Notice of Appeal mailed on February 15, 2008 and received by the Patent Office on February 20, 2008.

1. **REAL PARTY IN INTEREST**

The real party in interest is Schlumberger Technology Corporation, the Assignee of the above-referenced application by virtue of the Assignment recorded at reel 014940, frame 0009.

2. **RELATED APPEALS AND INTERFERENCES**

An Appeal Brief was filed for the present case on August 14, 2007, resulting in a final Office Action that was mailed on December 18, 2007. The present Appeal Brief is filed in response to the December 18, 2007 Office Action and in furtherance of the second Notice of Appeal mailed on February 15, 2008. Otherwise, Appellants are unaware of any additional

appeals or interferences related to this Appeal. The undersigned is Appellant's legal representative in this Appeal. Schlumberger Technology Corporation, the Assignee of the above-referenced application as evidenced by the documents listed above, will be directly affected by the Board's decision in the pending appeal.

3. **STATUS OF CLAIMS**

Claims 1-23 stand finally rejected by the Examiner as noted in the Office Action dated December 18, 2007. The rejection of claims 1-23 is appealed.

4. **STATUS OF AMENDMENTS**

The December 8, 2006 Amendment, submitted prior to the Examiner's Final Rejection mailed February 20, 2007, was entered by the Examiner.

5. **SUMMARY OF THE CLAIMED SUBJECT MATTER**

a.) Independent Claim 1

Independent claim 1 is directed to a system for preventing cross flow of fluid between formations 14, 16 that intersect a wellbore 10. (See page 2, lines 22-24, paragraph 0010). The flow of fluid from formation 14 up through wellbore 10 (or the flow of fluid down through wellbore 10 into formation 14) is controlled by a flow valve 20. The flow valve 20 can be hydraulically actuated via a hydraulic control line 21. (See page 3, lines 6-12, paragraph 0011). A cross-flow prevention valve 50 is used to selectively prevent undesired flow between formations 14 and 16. (See page 4, lines 21-23, paragraph 0016). The cross-flow prevention valve 50 is actuated with the same hydraulic control line 21 used to control flow valve 20. (See page 4, lines 24-26, paragraph 0016).

b.) Independent Claim 14

Independent claim 14 is directed to a system for preventing cross flow of fluid between formations 14, 16 that intersect a wellbore 10. (See page 2, lines 22-24, paragraph 0010). The system comprises a first multi-position flow valve 20 used to control the flow of fluid from formation 14 up through wellbore 10 (or the flow of fluid down through wellbore 10 into formation 14). The system also comprises a second multi-position flow valve 22 used to control the flow of fluid from a next adjacent formation 16 up through wellbore 10 (or the flow of fluid down through wellbore 10 into formation 16). (See page 3, lines 6-12, paragraph 0011). A cross-flow prevention valve 50 is disposed between the first multi-position flow valve 20 and the second multi-position flow valve 22 to selectively prevent undesired flow between formations 14 and 16. (See page 4, lines 21-23, paragraph 0016, and Figure 1).

c.) Independent Claim 19

Independent claim 19 is directed to a method for preventing cross flow of fluid between formations 14, 16 that intersect a wellbore 10. (See page 2, lines 22-24, paragraph 0010). The method comprises controlling fluid flow from formation 14 up through wellbore 10 (or down through wellbore 10 into formation 14) by a flow valve 20. (See page 3, line 6-8, paragraph 0011). The method further comprises preventing flow between formations 14 and 16 with a cross-flow prevention valve 50. (See page 4, lines 21-23, paragraph 0016). The method also comprises actuating the cross-flow prevention valve 50 and the flow valve 20 with a single hydraulic control line 21. (See page 4, lines 24-26, paragraph 0016).

6. **GROUND S OF REJECTION TO BE REVIEWED ON APPEAL**

a.) Whether claims 1-5, 7 and 19-23 are unpatentable under 35 U.S.C. § 102(b) as anticipated by the Williamson, Jr. et al. reference, U.S. Patent No: 6,668,936.

b.) Whether claim 14 is unpatentable under 35 U.S.C. § 102(b) as anticipated by the Ringgenberg, Jr. et al. reference, U.S. Publication No: 2002/0023746.

c.) Whether claims 6 and 8-13 are unpatentable under 35 U.S.C. § 103(a) as obvious over the Williamson Jr. et al. reference in view of the Murray et al. reference, U.S. Patent No: 5,862,865.

d.) Whether claims 15-18 are unpatentable under 35 U.S.C. § 103(a) as obvious over the Ringgenberg et al. reference in view of the Williamson Jr. et al. and the Murray et al. reference.



7. **ARGUMENT**

**a.) Rejection of claims 1-5, 7 and 19-23 as unpatentable under 35 U.S.C. § 102(b) as anticipated by the Williamson, Jr. et al. reference, U.S. Patent No: 6,668,936.**

**- Claims 1-5, 7 and 19-23**

Independent claims 1, 19 and dependent claims 2-5, 7, 20-23 were improperly rejected as anticipated by the Williamson Jr. et al. reference. The reference fails to disclose elements of the subject claims.

The Williamson, Jr. et al. reference discloses a hydraulic control system used to control well tool assemblies. Multiple well tool assemblies 12, 14, 16 and 18 are connected along a tubular string 20 positioned in wellbore 22. In one embodiment, the well tool assemblies are hydraulically operated to control fluid flow between wellbore 22 and corresponding formations or zones 24, 26, 28 and 30. The well tool assemblies are operated by control lines 36 that extend to the well tool assemblies from a control module 32. The control module 32 places "one or more of the control lines 34 in fluid communication with one or more lines 36". (See column 3, lines 29-40). Accordingly, multiple control lines 36 are used in conjunction with control module 32 to control operation of the well tool assemblies. With respect to the control lines 34 routed downhole, the Williamson, Jr. et al. reference describes the use of multiple control lines 34 to provide input to control module 32 rather than to control well tool assemblies. Furthermore, the reference completely fails to provide any suggestion regarding controlling both a flow valve and a cross-flow prevention valve.

The Williamson, Jr. et al. reference provides specific examples as to how control lines 34 are utilized. In one example, control module 32 is interconnected between lines 34 and lines 36 and operates in response to pressure in one or more of the lines 34. In this example, "pressure in one of the lines 34 may be increased to thereby provide fluid communication between another

one of the lines 34 and one or more of the lines 36 to thereby operate one or more of the tool assemblies" (emphasis added). (See column 3, lines 41-46). In another example, the pressure differential between two of the lines 34 is used to cause control module 32 "to provide fluid communication between another one of the lines 34 and one or more of the lines 36." (See column 3, lines 47-50). In another example, a series of pressure differentials is applied to lines 34 to select certain one or more of the lines 36 for fluid communication "with certain one or more of the lines 34". (See column 3, lines 51-58). Throughout the disclosure and examples found in the Williamson, Jr. et al. reference, control module 32 and multiple control lines 36 are used to control the well tool assemblies, and there is no teaching or suggestion for using a single control line 34 to control both a flow valve and a cross-flow prevention valve. Accordingly, the rejection of these claims should be withdrawn.

Additionally, the Williamson, Jr. et al. reference only illustrates and describes well tool assemblies as positioned in corresponding formations. Each of the well tool assemblies 12, 14, 16, 18 is "configured for controlling fluid flow between the wellbore 22 and one of multiple formations". (See column 3, lines 10-16). The Williamson Jr. et al. reference only suggests the use of flow control devices that are individually associated with corresponding formations or zones. There is absolutely no teaching related to use of a cross-flow prevention valve, as in the present claims. Accordingly, the Williamson, Jr. et al. reference fails to support the present rejection under 35 USC 102(b).

By way of specific example, the Williamson, Jr. et al. reference does not disclose or suggest a flow valve controlling flow from one of the formations combined with a "cross-flow prevention valve selectively preventing flow between the formations" as recited in independent claim 1. Furthermore, the reference fails to disclose or suggest a flow valve "actuated with a hydraulic control line" and a "cross-flow prevention valve" also "actuated with the hydraulic control line" as further recited in independent claim 1. Similarly, the Williamson, Jr. et al. reference does not disclose or suggest controlling flow from one of the formations with the flow valve combined with "selectively preventing flow between the formations with a cross-flow prevention valve" as recited in independent claim 19. Furthermore, the reference fails to disclose



or suggest "actuating the cross-flow prevention valve and the flow valve with a single hydraulic control line" as further recited in amended, independent claim 19. Accordingly, independent claims 1 and 19 are not anticipated by the cited reference, and the rejection should be withdrawn.

In the previous final Office Action dated February 20, 2007, the Williamson Jr. et al. reference was relied on as disclosing a flow valve and a cross-flow prevention valve both controlled by one hydraulic control line. In fact, a statement was made in the February 20, 2007 Office Action that the Williamson, Jr. et al. reference "discloses the usage of 'one or more control lines 34, or other types of flow paths' (col. 3, lines 32-33)." (See February 20, 2007 Office Action, page 4). The Examiner also argued against Applicant's position by stating the "applicant quotes a section of the specification, column 6, where multiple lines are used to control multiple valves, but that does not exclude the presence of other embodiments where one hydraulic line can be used." (See February 20, 2007 Office Action, page 4). However, Applicant respectfully submits the Williamson, Jr. et al. reference cannot be relied on as providing this asserted teaching. The Williamson Jr. et al. system relies on a complex, multi-line system and does not disclose control over a flow valve and a cross-flow prevention valve with one hydraulic control line. Additionally, the Williamson Jr. et al. reference completely fails to disclose or even suggest a cross-flow prevention valve. Accordingly, the rejection should be withdrawn.

Claims 2-5, 7 and 20-23 ultimately depend from either independent claim 1 or independent claim 19. These dependent claims are patentable over the cited reference for the reasons provided above with respect to their corresponding independent claims as well as for the unique subject matter recited in each of the claims 2-5, 7 and 20-23.

**b.) Rejection of claim 14 as unpatentable under 35 U.S.C. § 102(b) as anticipated by the Ringgenberg et al. reference, U.S. Publication No: 2002/0023746.**

**- Claim 14**

Independent claim 14 was improperly rejected as anticipated by the Ringgenberg et al. reference. The reference fails to disclose elements of the subject claims.

In the Office Action dated December 18, 2007, the Ringgenberg et al. reference reference is relied on as disclosing a system 20 having a "second multi-position flow valve 104 controlling flow from formation 84 into assembly 20" (See Office Action, page 4). However, Appellant respectfully submits the Ringgenberg et al. reference does not disclose these elements. Instead, the Ringgenberg et al. reference describes "check valves 104" that do not control flow from an active formation but rather serve as check valves that allow fluid to be flowed outwardly into a disposal formation 84. After perforating a test formation 82, pressure is applied to a string 87 at the Earth's surface "to flow the undesired fluid out through check valves 104 and into the disposal formation 84." (See page 4, paragraphs 0044-0045).

Accordingly, the Ringgenberg et al. reference fails to disclose or suggest the general configuration of a "first multi-position flow valve" combined with a "second multi-position flow valve" and a "cross-flow prevention valve" as recited in independent claim 14. Furthermore, the Ringgenberg et al. reference completely fails to disclose or suggest "a second multi-position flow valve controlling the flow from a next adjacent active formation" as also recited in independent claim 14. The Ringgenberg et al. check valves 104 oriented to allow outflow of disposal fluid cannot be equated with the second multi-position flow valve controlling the flow "from a next adjacent active formation". Accordingly, the rejection should be withdrawn.

**c.) Rejection of claims 6 and 8-13 as unpatentable under 35 U.S.C. § 103(a) for being obvious over the Williamson Jr. et al. reference in view of the Murray et al. reference, U.S. Patent No: 5,862,865.**

**- Claims 6 and 8-18**

Claims 6 and 8-13 were improperly rejected as obvious over the Williamson Jr. et al. reference in view of the Murray et al. reference. No *prima facie* case of obviousness has been established.

Claims 6 and 8-13 ultimately depend from independent claim 1 and are patentable over the cited references for the reasons provided above with respect to independent claim 1 as well as for the unique subject matter recited in these dependent claims. The Murray et al. reference provides no disclosure that would obviate the deficiencies of the Williamson, Jr. et al. reference as described above.

The Murray et al. reference describes an insert assembly for use in a gas lift operation that has a tubing safety valve 16 with a flapper 18. (See column 2, lines 14-18). The insert assembly is useful when a well is converted to a gas lift operation and requires the use of valves, such as a tubing safety valve in combination with an annular-type safety valve. (See column 1, lines 54-58). However, the Murray et al. reference does not disclose or suggest either: a flow valve controlling flow from one of the formations combined with a "cross-flow prevention valve selectively preventing flow between the formations"; or a flow valve "actuated with a hydraulic control line" and a "cross-flow prevention valve" also "actuated with the hydraulic control line" as recited in independent claim 1. Accordingly, the Murray et al. reference fails to fill the deficiencies of disclosure in the Williamson, Jr. et al. reference as largely discussed above. Therefore, no *prima facie* case of obviousness has been established with respect to any of the subject claims, and the rejection of claims 6 and 8-13 should be withdrawn.

**d.) Rejection of claims 15-18 as unpatentable under 35 U.S.C. § 103(a) for being obvious over the Ringgenberg et al. reference in view of the Williamson Jr. et al. reference and the Murray et al. reference.**

**- Claims 15-18**

Claims 15-18 were improperly rejected as obvious over the Ringgenberg et al. reference in view of the Williamson Jr. et al. reference and the Murray et al. reference. No *prima facie* case of obviousness has been established.

Claims 15-18 ultimately depend from independent claim 14 and are patentable over the cited references for the reasons provided above with respect to independent claim 14 as well as for the unique subject matter recited in these dependent claims. The Williamson Jr. et al. and the Murray et al. references provides no disclosure that would obviate the deficiencies of the Ringgemberg et al. reference as described above.

The Williamson Jr. et al. and the Murray et al. references have been described herein. Neither reference discloses nor suggests first and second multi-position flow valves controlling flow from formations or a cross-flow prevention valve disposed therebetween. Accordingly, the references fail to fill the deficiencies of disclosure in the Ringgenberg et al. reference as largely discussed above with respect to independent claim 14.

By way of specific example, the references taken alone or in combination fail to disclose or suggest a "first multi-position flow valve controlling the flow from a first formation; a second multi-position flow valve controlling the flow from a next adjacent active formation", and a cross-flow prevention valve "disposed between the first multi-position flow valve and the second multi-position flow valve to selectively prevent flow between the first formation and the next adjacent active formation" as recited in independent claim 14. The Ringgenberg et al. reference, the Williamson, Jr. et al. reference and the Murray et al. reference simply do not disclose this structure. Accordingly, no *prima facie* case of obviousness has been established, and the rejection of claims 15-18 should be withdrawn.

In view of the above remarks, Applicant respectfully submits the Examiner has provided no supportable position or evidence that any of the claims 1-23 are anticipated under 35 U.S.C. § 102(b) or obvious under 35 U.S.C. § 103(a). Accordingly, Applicant

respectfully requests that the Board find claims 1-23 patentable over the art of record, withdraw all outstanding rejections, and allow claims 1-23.

An Appeal Brief fee in the amount of \$500 was previously paid with the Appeal Brief filed August 14, 2007. Currently, the fee for filing an Appeal Brief in support of the Notice of Appeal is \$510. Payment in the amount of \$10 to cover the difference is provided on the attached form PTO-2038. However, if the amount listed thereon is insufficient, or if the amount is unable to be charged to the credit card for any other reason, the Commissioner is authorized to charge Deposit Account No. 50-3054.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Robert A. Van Someren', written over a horizontal line.

Date: April 14, 2008

Robert A. Van Someren  
Reg. No. 36,038  
VAN SOMEREN, PC  
P.O. Box 2107  
Cypress, TX 77410-2107  
281-373-4369

8. **CLAIMS APPENDIX**

1. A system for preventing cross-flow between at least two formations intersecting a wellbore, comprising:

a flow valve controlling the flow from one of the formations;

the flow valve actuated with a hydraulic control line;

a cross-flow prevention valve selectively preventing flow between the formations;

and

the cross-flow prevention valve actuated with the hydraulic control line.

2. The system of claim 1, wherein the flow valve is a multi-position valve.

3. The system of claim 2, wherein the cross-flow prevention valve is actuated and the flow valve is shifted from one to another position with each pressure cycle in the hydraulic control line.

4. The system of claim 1, further comprising another flow valve controlling the flow from another of the formations.

5. The system of claim 4, wherein the another flow valve is actuated with the hydraulic control line.

6. The system of claim 1, wherein the flow valve is a sleeve valve.

7. The system of claim 1, wherein the wellbore comprises an injection wellbore.

8. The system of claim 1, wherein the cross-flow prevention valve comprises a flapper valve.

9. The system of claim 8, wherein:



the flapper valve comprises a mandrel housing a movable actuator and a flapper;  
and

the actuator is movable between a first position that forces the flapper to an open arrangement and a second position that enables the flapper to move to a closed arrangement.

10. The system of claim 9, wherein the flapper valve comprises a biasing mechanism that selectively biases the actuator between the first and second positions.

11. The system of claim 10, wherein the biasing mechanism biases the actuator to the first position when fluid in the hydraulic control line is below a certain pressure.

12. The system of claim 11, wherein the fluid in the hydraulic control line is above a certain pressure that overcomes the biasing mechanism to move the actuator to the second position.

13. The system of claim 12, wherein the flapper includes an internal biasing that pivots the flapper to a closed position when the actuator is in the second position.

14. A system for preventing cross-flow between at least two formations intersecting a wellbore, comprising:

a first multi-position flow valve controlling the flow from a first formation;

a second multi-position flow valve controlling the flow from a next adjacent active formation; and

a cross-flow prevention valve disposed between the first multi-position flow valve and the second multi-position flow valve to selectively prevent flow between the first formation and the next adjacent active formation.

15. The system of claim 14, wherein the cross-flow prevention valve comprises a flapper valve, and the flow valve and flapper valve are actuated with the same hydraulic control line.

16. The system of claim 15, wherein the flapper valve is actuated and the flow valve is shifted from one to another position with each pressure cycle in the hydraulic control line.

17. The system of claim 15, wherein the flapper valve is self-biased to a closed position when a hydraulic control line operatively connected to the flapper valve is pressurized below a certain pressure.

18. The system of claim 17, wherein the flapper valve is moved to an open position when the pressure in the hydraulic control line is above a certain pressure.

19. A method for preventing cross-flow between at least two formations intersecting a wellbore, comprising:

controlling the flow from one of the formations with a flow valve;  
selectively preventing flow between the formations with a cross-flow prevention valve; and  
actuating the cross-flow prevention valve and the flow valve with a single hydraulic control line.

20. The method of claim 19, wherein the flow valve comprises a multi-position valve and the controlling step comprises changing the positions of the multi-position flow valve.

21. The method of claim 20, wherein the actuating step comprises performing one pressure cycle in the single hydraulic control line.

22. The method of claim 20, wherein the cross-flow prevention valve comprises a flapper valve and the method further comprises biasing the flapper valve to a closed position when the single hydraulic control line is pressurized below a certain pressure.

23. The method of claim 22, further comprising moving the flapper valve to an open position when the single hydraulic control line is pressurized above a certain pressure.

9. **EVIDENCE APPENDIX**

Not Applicable

10. **RELATED PROCEEDINGS APPENDIX**

Not Applicable